	Application No.	Applicant(s)
Notice of Allowability	10/039,184	JENNE ET AL.
	Examiner	Art Unit	
	Philip B. Tran	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _06/06/2005_.

2. ☒ The allowed claim(s) is/are _3-5 and 8-10_.

3. ☒ The drawings filed on _31 December 2001_ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some*   c)☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1)☐ hereto or 2)☐ to Paper No./Mail Date _____ .

    (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

Philip Tran

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

2.   Authorization for this examiner's amendment was given in a telephone interview

with Mr. Chichester (Reg. No. 36,765), the undersigned, on June 24, 2005.

The application has been amended as follows:

IN THE SPECIFICATION:

Amend paragraph [0001] under the subtitle "CROSS-REFERENCE TO

RELATED APPLICATIONS" as follows:

[0001] This application is related to U.S. patent application publication number

20020078299, titled "Caching System and Method for a Network Storage System" by

Lin-Sheng Chiou, Mike Witkowski, Hawkins Yao, Cheh-Suei Yang, and Sompong Paul

Olarig, which was filed on December 14, 2000, now U.S. patent No. 6,792,507 and

which is incorporated herein by reference in its entirety for all purposes; U.S. patent

application serial number [[10/015,049]] **10/015,047**, titled "System, Apparatus and

Method for Address Forwarding for a Computer Network" by Hawkins Yao, Cheh-Suet

Yang, Richard Gunlock, Michael L. Witkowski, and Sompong Paul Olarig, which was

filed on October 26, 2001 and which is incorporated herein by reference in its entirety

for all purposes; U.S. patent publication number 20030200330, titled "System And

Method For Load-Sharing Computer Network Switch" by Sompong Paul Olarig, Mark

Lyndon Oelke, and John E. Jenne, which was filed on April 22, 2002, and which is

incorporated herein by reference in its entirety for all purposes; U.S. patent application

serial number 10/039,190, titled "Network Processor Interface System" by Sompong

Paul Olarig, Mark Lyndon Oelke and John E. Jenne, which is being filed concurrently on

December 31, 2001, and which is incorporated herein by reference in its entirety for all

purposes; and U.S. patent application serial number 10/039,189, titled "Xon/Xoff Flow

Control for Computer Network" by Hawkins Yao, John E. Jenne and Mark Lyndon

Oelke, which is being filed concurrently on December 31, 2001, and which is

incorporated herein by reference in its entirety for all purposes.

IN THE CLAIMS:

Amend claim 3 as follows:

3. (Currently amended) A method for providing buffer-to-buffer credit port-level

flow control for a computer network in operative communication with a plurality of

ingress and egress network processors, each having an egress port and an ingress port

that is associated with a buffer-to-buffer credit value corresponding to the current

number of frames the ingress port ~~may~~ send~~s~~, a buffer value corresponding to the

current total frame size the ingress port ~~may~~ send~~s~~, and a pending buffer-to-buffer

value corresponding to the pending buffer-to-buffer credits an egress port ~~may~~ issue~~s~~

the ingress port, and ~~wherein~~ a set of network processors is associated with a bridge,

the method comprising the steps of:

sending a frame from the ingress port to a destination egress port, if the ingress

port has a sufficient buffer-to-buffer credit value and buffer value;

decrementing the buffer-to-buffer credit value associated with the ingress port;

decrementing the buffer value associated with the ingress port;

determining whether to increment the buffer-to-buffer credit value associated with

the ingress port by incrementing the buffer-to-buffer credit value associated with the

ingress port if the product of one plus the buffer-to-buffer credit value times the

maximum frame size in bytes is less than or equal to a minimum egress buffering value;

~~wherein~~ the minimum egress buffering value corresponds to the minimum amount of

egress buffering that is available for any one egress port;

incrementing the pending credit value associated with the ingress port;

determining whether to send a credit message to the ingress port;

~~wherein~~ the computer ~~system~~ <u>network</u> further comprises a switch fabric; and

wherein the network processors are in operative communication with the switch

fabric via the associated bridge.

Amend claim 8 as follows:

8. (Currently amended) A system for providing buffer-to-buffer credit port-level

flow control for a computer network in operative communication with a plurality of

ingress and egress network processors, said system comprising:

a plurality of ingress and egress network processors, each of said plurality of

network processors having an egress port and an ingress port that is associated with a

buffer-to-buffer credit value corresponding to the current number of frames the ingress port ~~may~~ send<u>s</u>, a buffer value corresponding to the current total frame size the ingress port ~~may~~ send<u>s</u>, and a pending buffer-to-buffer value corresponding to the pending buffer-to-buffer credits an egress port ~~may~~ issue<u>s</u> the ingress port, and ~~wherein~~ a set of said plurality of network processors is associated with a bridge, wherein:

a frame is sent from the ingress port to a destination egress port, if the ingress port has a sufficient buffer-to-buffer credit value and buffer value;

the buffer-to-buffer credit value associated with the ingress port is decremented;

the buffer value associated with the ingress port is decremented;

the buffer-to-buffer credit value associated with the ingress port is determined whether to be increment, the buffer-to-buffer credit value associated with the ingress port is incremented if the product of one plus the buffer-to-buffer credit value times the maximum frame size in bytes is less than or equal to a minimum egress buffering value, ~~wherein~~ the minimum egress buffering value corresponds to the minimum amount of egress buffering that is available for any one egress port;

the pending credit value associated with the ingress port is incremented;

a credit message to the ingress port is determined whether to be sent;

~~wherein~~ the computer ~~system~~ <u>network</u> further comprises a switch fabric; and

wherein the network processors are in operative communication with the switch fabric via the associated bridge.

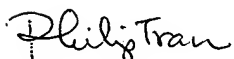### *Allowable Subject Matter*

3.   Claims 3-5 and 8-10 are allowed.

4.   The following is an examiner's statements of reason for allowance:

The examiner has found that the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with the specific added limitations as recited in independent claims and subsequent dependent claims. The prior art of record fails to teach or suggest a method and system for providing buffer-to-buffer credit port-level flow control for a computer network in operative communication with a plurality of ingress and egress network processors wherein the network processors are in operative communication with a switch fabric via an associated bridge wherein sending a frame from the ingress port to a destination egress port, if the ingress port has a sufficient buffer-to-buffer credit value and buffer value and determining whether to increment the buffer-to-buffer credit value associated with the ingress port by incrementing the buffer-to-buffer credit value associated with the ingress port if the product of one plus the buffer-to-buffer credit value times the maximum frame size in bytes is less than or equal to a minimum egress buffering value wherein the minimum egress buffering value corresponds to the minimum amount of egress buffering that is available for any one egress port.

ADDITIONAL REFERENCES

5.   The examiner as of general interest cites the following references:

A) Barkey et al, U.S. Pat. No. 6,044,406.

B) Lauck et al, U.S. Pat. No. 6,615,271.

6.   Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Philip B. Tran whose telephone number is (571) 272-

3991. The fax phone number for the organization where this application or proceeding is

assigned is 703-872-9306.

8.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Philip B. Tran
Art Unit 2155
June 24, 2005